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**13.03.91 Bulletin 91/11**(71) Applicant: **NKK CORPORATION**  
**1-2 Marunouchi 1-chome, Chiyoda-ku**  
**Tokyo(JP)**(72) Inventor: **Watanabe, Tsutomu**  
**C/o NKK Corporation, 1-2, 1-chome,**  
**Marunouchi**  
**Chiyoda-ku, Tokyo(JP)**  
Inventor: **Sagiyama, Masaru**  
**C/o NKK Corporation, 1-2, 1-chome,**  
**Marunouchi**  
**Chiyoda-ku, Tokyo(JP)**  
Inventor: **Kawabe, Masaki**  
**C/o NKK Corporation, 1-2, 1-chome,**  
**Marunouchi**  
**Chiyoda-ku, Tokyo(JP)**  
Inventor: **Morita, Masaya**  
**C/o NKK Corporation, 1-2, 1-chome,**  
**Marunouchi**  
**Chiyoda-ku, Tokyo(JP)**(74) Representative: **Henkel, Feiler, Hänzel &**  
**Partner**  
**Möhlstrasse 37**  
**W-8000 München 80(DE)**(54) **Electroplated steel sheet having a plurality of coatings, excellent in workability, corrosion resistance and water-resistant paint adhesivity.****EP 0 406 579 A3**

(57) An electroplated steel sheet having a plurality of coatings, excellent in workability, corrosion resistance and water-resistant paint adhesivity, which comprises:

an iron-chromium-zinc alloy coating as a lower layer, having a coating weight of from 0.1 to 40 g/m<sup>2</sup> per side, formed on the surface of a steel sheet, consisting essentially of:

iron : from 3 to under 15 wt.%,

chromium : from 0.1 to 1 wt.%, and

the balance being zinc and incidental impurities;

another iron-chromium-zinc alloy coating as an intermediate layer, having a coating weight of from 20 to

59.9 g/m<sup>2</sup> per side, formed on the iron-chromium-zinc alloy coating as the lower layer, consisting essentially of:

iron : from 10 to 40 wt.%,

chromium : from over 1 to under 30 wt.%,

and

the balance being zinc and incidental impurities;

and a chromating coating as an upper layer, formed on the another iron-chromium-zinc alloy coating as the intermediate layer, which comprises a metallic chromium film and a hydrated chromium oxide film, each having a coating weight of at least 5 mg/m<sup>2</sup> per side.

**EP 90 11 0815**

### DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl.5)
A,D	EP-A-0 285 931 (NIPPON STEEL CORP.) - - -		C 25 D 5/10 C 25 D 3/56 C 25 D 11/38
A	GB-A-2 193 973 (NIPPON STEEL CORP.) - - - - -		
			TECHNICAL FIELDS SEARCHED (Int. Cl.5)
			C 25 D
The present search report has been drawn up for all claims			
Place of search	Date of completion of search	Examiner	
The Hague	10 December 90	VAN LEEUWEN R.H.	
<b>CATEGORY OF CITED DOCUMENTS</b> X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention		E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons ..... & : member of the same patent family, corresponding document	